its transformations.—F. **Bourion** and A. **Sénéchal**: The estimation of chromium by oxidation in alkaline solution. The results are exact with chromium alone or in presence of iron. The determinations are inexact in presence of nickel, cobalt, and manganese.—Paul **Gaubert**: The modifications of form of crystals of some substances artificially coloured during their growth.—G. **Friedel**: The crystalline symmetries shown by the diffraction of the Röntgen rays.—L. **Blaringhem**: The hereditary transmission of rust in the hollyhock.—M. **Sauvageau**: Fucus of the Straits of Gibraltar.—J. **Vallot** and Raoul **Bayeux**: Experiments made at Mont Blanc, in 1913, on spontaneous muscular activity at very high altitudes. The daily work done by a squirrel at the summit of Mont Blanc was reduced to one-seventh of the daily work done at Chamonix.—M. **Piettre** and A. **Vila**: The study of the plasmas after sugar dialysis.—Louis **Roule**: The influence exerted by the reproductive function on the migrations of salmon in spring and summer. There is a definite relation between the ascent of rivers by salmon and the condition of their reproductive organs.—A. **Trillat**: The influence of surface tension of liquids on the removal of micro-organisms by an air current. If air is bubbled through a liquid containing micro-organisms in suspension, the latter may be carried on with the air current if the droplets of liquid produced are sufficiently small, and the size of the drops is governed by the surface tension of the liquid.—L. **Mengaud**: The lower Aptian marl of the province of Santander.—G. J. **Painvin**: New contribution to the geology of the region of high plateaux situated to the north and north-west of Bou-Denib.—René **Fourtau**: The echinitic fauna of the raised shores of the Red Sea.—G. **Vâlsan**: Remarks on the terraces of the eastern Roumanian plain.

NEW SOUTH WALES.

Linnean Society, November 26, 1913.—Mr. W. S. Dun, president, in the chair.—W. N. **Benson**: The geology and petrology of the Great Serpentine Belt of New South Wales. Part iii., Petrology. A detailed account of the rocks collected over the whole area described in parts i.–ii. The material is classified under (A) igneous rocks, twelve divisions; and (B) sedimentary rocks: (*a*) clastic rocks of the Eastern Series, the Tamworth Series, cherts and breccias; (*b*) the limestone; (*c*) Baldwin Agglomerates; (*d*) Barraba, Burindi, and Rocky Creek Series; (*e*) Permo-Carboniferous sandstone.—F. H. **Taylor**: A revision of the Culicidæ in the Macleay Museum.—Dr. R. **Greig-Smith**: Contributions to our knowledge of soil fertility. Nos. vii.–xi. (vii.) When soils are heated or treated with volatile disinfectants, the bacterial development depends upon the amount of fatty matter present. Field soils show little difference, while a garden soil produced about ten times more bacteria, when treated with chloroform, than when heated at 65°. (viii.) The demonstration of toxins in soils depends upon obtaining a soil in which the toxins preponderate over the nutrients, and in using an appropriate dilution in making the extracts. Equal parts of soil and water generally yield the most toxic extract. (ix.) Rain removes toxin from soil, but the toxicity returns with dry weather. Similarly, a soil originally toxic, becomes non-toxic when extracted with water, and the toxicity reappears upon incubation in the moist condition. (x.) When nitrogenous, organic matter is saturated with wax or vaseline, and subsequently treated with chloroform, it does not decay any quicker on account of the treatment. (xi.) Naphthalene induces an increase in the number of bacteria in soils.—Dr. J. M **Petrie**: Note on the occurrence of strychnicine. The native strychnine-tree, *Strychnos psilosperma,* contains the alkaloid strychnicine, which was discovered, in 1902, in the leaves of the Nux-vomica. Its properties differ from those of strychnine or brucine.—R. J. **Tillyard**: A study of the Odonata of Tasmania, in relation to the Bassian Isthmus. Though the dragonflies of Tasmania are fairly well known, the number of species is small, particularly on rivers; still waters support a more abundant fauna. A comparison made with the dragonfly fauna of southern Victoria gives the following results. Of the forms that breed exclusively in running water, about 22 per cent. of the Victorian fauna are found to have reached Tasmania. Of the forms that breed in still water about 80 per cent. have reached Tasmania. The 20 per cent. that failed to do so, all belong to the most recent genera, which have come into Australia from the north. The reason suggested for the discrepancy is that, throughout a long period, the connection between the island and S. Victoria was of such a nature that few permanently running water-courses were formed.

BOOKS RECEIVED.

Lowson's Text-Book of Botany. Indian edition. Adapted by M. Willis, with a preface by Dr. J. C. Willis. Pp. xii+602. (London: W. B. Clive.) 6*s*. 6*d*.

Annuaire Astronomique et Méteorologique pour 1914. By C. Flammarion. Pp. 427. (Paris: E. Flammarion.) 1.50 francs.

Conseil Permanent International pour l'Exploration de la Mer. Rapports et Procès-Verbaux des Réunions. Vol. xix. Procès-Verbaux. Juillet 1912–Juillet 1913. Pp. vii+142. (Copenhague: A. F. Host et Fils.)

La Face de la Terre (Das Antlitz der Erde). By Prof. E. Suess. Translated by E. de Margerie. Tome iii. (3^{e} Partie.) Pp. x+957–1360. (Paris: A. Colin.) 12 francs.

Canada. Department of Mines. Mines Branch. The Production of Copper, Gold, Lead, Nickel, Silver, Zinc, and other Metals in Canada during the Calendar Year 1912. By C. T. Cartwright. Pp. 86. (Ottawa: Government Printing Bureau.)

Summary Report of the Mines Branch of the Department of Mines for the Calendar Year Ending December 31, 1912. Pp. ix+174+xvi plates. (Ottawa.) 15 cents.

Records of the Survey of India. Vol. iii., 1911–12. Prepared under the direction of Col. S. G. Burrard. Pp. ii+176+12 maps. (Calcutta: Superintendent, Government Printing, India.) 6*s*.

Smithsonian Institution: Bureau of American Ethnology. Bulletin 83. Chippewa Music, ii. By F. Densmore. Pp. xxi+341+45 plates. (Washington: Government Printing Office.)

Traité Raisonné de la Pisciculture et des Pêches. By Prof. L. Roule. Pp. viii+734. (Paris: J. B. Baillière et Fils.)

The A.B.C. Guide to Astronomy. By Mrs. H. P. Hawkins. Third edition. Pp. 124. (London: Simpkin and Co., Ltd.; Bedford: Beds. Times Publishing Co., Ltd.) 1*s*. 6*d*. net.

The Revolving Star Map with Movable Declination Scale. By Mrs. H. P. Hawkins. (London: Simpkin and Co., Ltd.; Bedford: Beds. Times Publishing Co., Ltd.) 1*s*. net.

The Star Almanac for 1914. By Mrs. H. P. Hawkins. (London: Simpkin and Co., Ltd.; Bedford: Beds. Times Publishing Co., Ltd.) 6*d*. net.

Experience Teaches. By I. Trinda. Pp. xiv+194. (London: Simpkin and Co., Ltd.) Limp leather, 4*s*. net; cloth, 2*s*. 6*d*. net.

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Department of Commerce and Labor Bureau of the Census. Thirteenth Census of the United States taken in the Year 1910. Statistics. 52 parts. (Washington: Government Printing Office.)

New Zealand. Dominion Museum. Bulletin No. 4. The Stone Implements of the Maori. By E. Best. Pp. 410+li plates. (Wellington: J. Mackay.)

Ministry of Finance, Egypt. Survey Department. The Value of Gravity at Eight Stations in Egypt and the Sudan. By P. A. Curry. Pp. 65+v plates. (Cairo: Government Press.) P.T.10.

Essays and Studies Presented to William Ridgeway on his Sixtieth Birthday, August 6, 1913. Edited by Dr. E. C. Quiggin. Pp. xxv+656+plates. (Cambridge University Press.) 25*s.* net.

Celluloid Dangers with Some Suggestions. By D. W. Wood. Pp. 36+plates. (London: British Fire Prevention Committee.) 2*s.* 6*d.*

Catalogue of Lantern Slides. Part ii. Pp. xx+351–918. (London: Newton and Co.)

Catalogue of the Noctuidæ in the collection of the British Museum. By Sir G. F. Hampson, Bart. Pp. xiv+609; plates ccxxii–ccxxxix. (London: British Museum (Natural History); Longmans and Co.)

The Animal Kingdom. By Dr. Zwanziger. Translated by G. K. Gude. Pp. vi+92. (London: S.P.C.K.) 8*s.* 6*d.* net.

Meteorological Office. The Observer's Handbook. Annual Edition, 1913. Pp. xxiv+157+plates. (London: H.M.S.O.; Wyman and Sons, Ltd.) 3*s.*

Die Riviera. By A. Voigt. Pp. vi+466+vi plates. (Berlin: W. Junk.) 7 marks.

Sound. By Dr. J. W. Capstick. Pp. vi+296. (Cambridge University Press.) 4*s.* 6*d.*

Cambridge County Geographies:—Northumberland. By S. R. Haselhurst. Pp. xi+181+2 maps. Merionethshire. By A. Morris. Pp. ix+166+2 maps. (Cambridge University Press.) Each 1*s.* 6*d.*

Handbuch der Arbeitsmethoden in der anorganischen Chemie. Edited by Dr. A. Stähler. Dritter Band. Allgemeiner Teil. Erste Hälfte. Pp. x+692. (Leipzig: Veit and Co.) 22 marks.

International Congress of Americanists. Proceedings of the Eighteenth Session. London, 1912. Parts 1 and 2. Pp. lxxxviii+570+plates. (London: Harrison and Sons.) 2 guineas net.

Travaux et Mémoires du Bureau International des Poids et Mesures. Tome xv. (Paris: Gauthier-Villars.)

DIARY OF SOCIETIES.

THURSDAY, JANUARY 8.

CONCRETE INSTITUTE, at 7.30.—Factory Construction: P. M. Fraser.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—British Practice in the Construction of High-tension Overhead Transmission Lines: B. Welbourn.

FRIDAY, JANUARY 9.

ROYAL ASTRONOMICAL SOCIETY, at 5.—Hydrogen and the Primary Constituents of Nebulæ: J. W. Nicholson.—The Short-period Variable XZ Cygni: C. Martin and H. C. Plummer.—A New Algol Type Variable Star in Pegasus: A Stanley Williams.—*Probable Papers:* The Number of Stars of Each Photographic Magnitude down to 17·0 m. in Different Galactic Latitudes: S. Chapman and P. J. Melotte.—The Proper Motions of the Brighter Stars within 17° of the Pole, considered in relation to their Spectral Type: H. S. Jones.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The Application of Power Railway Signalling in Great Britain: C. J. Routh.

MONDAY, JANUARY 12.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—The Evolution of the Federal Capital, Australia—Canberra: G. Taylor.

TUESDAY, JANUARY 13.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Superheating Steam in Locomotives: H. Fowler.

THURSDAY, JANUARY 15.

ROYAL GEOGRAPHICAL SOCIETY, at 5.—Some Scientific Results of Captain Scott's Antarctic Expedition: G. Taylor.

ROYAL SOCIETY OF ARTS, at 4.30.—Indian Museums: A Centenary Retrospect: Col. T. H. Hendley, C.I.E.

INSTITUTION OF MINING AND METALLURGY, at 8.

LINNEAN SOCIETY, at 8.—Lantern Slides Illustrating the Fauna and Flora of the Interior of Vancouver, from her last journey: Mrs. Henshaw.—Some Observations on the Tentacles of *Blennius gattorugine*: H. A. Baylis.—(1) Some Recent Additions to the British Flora; (2) A Note on Article 45 of the Vienna Code; (3) The Abridgment of Miller's "Gardener's Dictionary" of 1754, and Hill's "British Herbal" of 1756: G. C. Druce.

ILLUMINATING ENGINEERING SOCIETY, at 8.—Discussion on Mr. C. J. Waldram's Paper: Some Problems in Daylight Illumination, with Special Reference to School Planning."

FRIDAY, JANUARY 16.

INSTITUTION OF MECHANICAL ENGINEERS, at 8.—Commercial Tests of Internal Combustion Engines: W. A. Tookey.

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